CATORHINTHA MENDICA, A GREAT PLAINS COREID NOW ESTABLISHED ON THE ATLANTIC COAST (HEMIPTERA: COREIDAE)[1]

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ABSTRACT: *Catorhintha mendica* Stal, a coreid native to the Great Plains, is closely associated with the wild four o'clock, *Mirabilis nyctaginea* (Michx.) MacMill., a prairie plant established in the eastern U.S. via seed carried in railroad cars. *C. mendica* has invaded the East, following its host plant along railroad right-of-ways. Additional records for Michigan, Minnesota, Ohio, Pennsylvania and Wisconsin, and the first record for New York are given; the record for New York (Long Island) documents the spread of *C. mendica* to the Atlantic Coast.

The coreid, *Catorhintha mendica* Stal, is associated with the wild four o'clock, *Mirabilis nyctaginea* (Michx.) MacMill. (Nyctaginaceae) (Balduf 1942, 1957, 1962). In addition, populations of the coreid have also been found developing on *Mirabilis hirsuta* (Pursh) MacMill. at the Cayler Prairie Preserve in Dickinson County, Iowa, in 1977 (S. Kinsman, pers. comm.); this is a new host plant record for *C. mendica.* Both insect and *M. nyctaginea* are indigenous to the Great Plains, neither occurring originally east of western Illinois. In a carefully documented study, Balduf (1957) has shown that the plant moved eastward with rail traffic, its seed transported on freight cars loaded with surplus agricultural products originating in the plant's native range. From his own collecting and from examining museum specimens, Balduf was able to show that *C. mendica* invaded the eastern United States as its food plant became established along railroad right-of-ways. Presumably on its own powers of dispersal, the coreid bug had become established in eastern Illinois, Ohio, and Wisconsin by the 1940's (more recent Wisconsin records are given by Yonke and Medler, 1969). The easternmost locality available to Balduf was Lickdale (Lebanon County), Pennsylvania (about 77° 30′ W longitude). Balduf did not give dates, but the Pennsylvania material was collected on 8 July 1942 (8 specimens) and 16 September 1951 (2 specimens) (deposited in the Pennsylvania Department of Agriculture collection, Harrisburg). The most recent eastern record is based on a specimen taken in 1970 near Luray (Page County), Virginia (Hoffman 1975).

An examination of specimens in the U.S. National Museum collection (USNM) shows that *C. mendica* actually had reached Ohio, Wisconsin and Minnesota as early as 1910, much earlier than stated by Balduf. Recent

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collecting shows that *C. mendica* is established along the railroad in different areas of Pennsylvania and that this coreid now has extended its range to the Atlantic coast. The records that follow are based on specimens from the collections of the USNM and the Pennsylvania Department of Agriculture (PDA) and on personal collecting; voucher specimens from our collecting have been deposited in the collections of Cornell University (Ithaca, NY) and the PDA. All known distribution records in the eastern U.S., including those listed below, are mapped in Figure 1.

MICHIGAN: *Ingham County,* East Lansing, Michigan State University campus. 21 July 1981, nymphs and one adult on *M. nyctaginea* in gardens, Daniel K. Young. *Wayne County,* 7 October 1939, Beebe. (USNM).

MINNESOTA: *Big Stone County,* 20 July 1910, H.G. Barber colln. (USNM).

NEW YORK: *Suffolk County,* Rt. 21 south of Yaphank, Long Island, 30 May 1981, nymphs and adults on *M. nyctaginea,* E.R. Hoebeke and A.G. Wheeler, Jr.; same locality, 29 August 1981, nymph and adult on *M. nyctaginea,* T.J. Henry and A.G. Wheeler, Jr.

OHIO: *Mercer County,* Durbin, 24 May 1915, H.G. Barber colln. (USNM).

PENNSYLVANIA: *Erie County,* Erie, 1 August 1969, Clifford Barry coll., ex: light trap (PDA). *Franklin County,* NE Chambersburg, 16 July 1974, B.R. Stinner and A.G. Wheeler, Jr. *Dauphin County,* Hershey, 18 June 1979, nymphs and adults on *Mirabilis nyctaginea,* T.J. Henry and A.G. Wheeler, Jr. *Union County,* near Lewisburg, 10 June 1980, nymphs and adults on *M. nyctaginea,* A.G. Wheeler, Jr. *Cumberland County,* Enola Railroad Yards, 13 August 1980, on *M. nyctaginea,* A.G. Wheeler, Jr. *Wyoming County,* Tunkhannock, 30 July 1981, on *M. nyctaginea,* A.G. Wheeler, Jr.

WISCONSIN: *Crawford County,* Prairie du Chien, 29 August 1927, F.M. Uhler (USNM). *Dane County,* Madison, 18 July 1916, J.C. Hambleton (USNM).

The spread of *Mirabilis* resulted from the development of agricultural areas in the prairie states which began shipping produce to the eastern population centers over newly completed railways during the 1850's. This traffic was an available means of dispersal for *Mirabilis* which began appearing along the railroads in the east between 1880 and 1900 (Balduf, 1957). By the early 1940's the specialist coreid *C. mendica* had become established along the railroad as far east as eastern Pennsylvania. The bug now has followed its host plant along railroad right-of-ways to the shore of Lake Erie and to the Atlantic coast (Long Island).

Faunal changes occur continually but rarely can be traced accurately; too often the intensive collecting and survey work necessary to delineate changes in range simply are not done. Balduf's study is unique for documenting the railroad as the dispersal agent for *Mirabilis nyctaginea,* whose establishment provided a pathway of invasion for its intimate associate *Catorhintha mendica.*

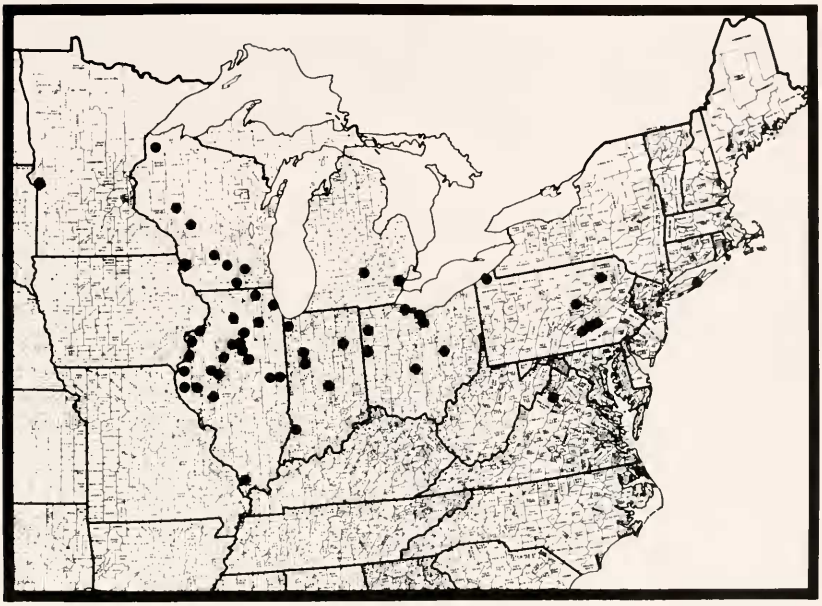

Figure 1. Distribution of *Catorhintha mendica* in the eastern United States.

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